



The Role of Cohousing in Building Sustainable Communities: Case studies from the UK

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Abstract

This paper explored the role of cohousing models in the UK and discussed the benefits and limitations of cohousing models by exploring residents' motivation and daily living. Through case studies in the UK, semi-structured interviews were carried out to establish the environmental and social sustainability of cohousing and to understand residents thinking and behaviour. This study found that cohousing could benefit various age groups, and promote residents' thinking and behaviour change towards sustainable living. The findings of this research will establish a better understanding of UK cohousing and highlight the potentials and possibilities of cohousing communities.

Keywords: sustainable communities, cohousing, environmental sustainability, social sustainability

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1.0 Introduction

In today's society, importance is given to the quality of our living environments and our social lives. As a result, architects, engineers, housing officers, community development officers and neighbourhood managers play a part in creating safe, green and friendly living environments. In 2003, the concept of a 'sustainable community' was proposed by the UK government. This is defined as an economically, environmentally, socially positive, mutually beneficial and resilient community. By promoting various housing provision models, such as cohousing, the government aimed to build communities that would stand the test of time and in which people 'wanted to live and work.' Cohousing is a creative model to achieve the sustainable community concept and to contribute to affordable living. It is a new collaborative housing model in the UK, and it is designed to foster meaningful relationships, social interaction and a sustainable community through a low carbon lifestyle.

This paper explores the cohousing model in the UK and whether it can be used as an evaluation tool to guide thinking and behaviour and foster a sustainable community. The benefits and limitations of the model will be discussed through exploring case studies in the UK and residents' interviews will be used to establish thinking and behaviour, environmental and social sustainability. The findings of this research will establish a better understanding of UK cohousing and highlight the possibilities of cohousing communities.

2. 0 Literature Review

2.1 What is cohousing?

The word 'cohousing' comes from 'co-operative housing' and is a housing model which offers a possible solution to the housing crisis (Priest, 2015). This model is different from Self-build housing and Housing co-operatives. The definition of cohousing by UK Cohousing Network is describe as a type of intentional community, composed of self-contained homes and supplemented by shared facilities where the community is planned and managed by residents. It is also an alternative residential arrangement consisting of individual homes facing a shared area with a common house for group gatherings (Waxman, 2005). This new collaborative housing concept is designed to foster social interaction and energy efficiency concepts. The research records that the origin of cohousing began in Denmark in the 1960s (Priest, 2015). The first example of cohousing was by Danish architect Jan Gudmand-Hoyer in 1964 (Canadian Cohousing Network, 2016). It was first developed to achieve social interaction and community cohesion in Denmark and the Netherlands (Williams, 2005). Subsequently, cohousing design was found mainly in Sweden, United Kingdom, Canada, Australia and North America (Rui, 2014). It is home to 50,000 people (1% of the population) in Denmark, and has become established across Northern Europe and is a typical housing model which benefits different age groups. Therefore, the current research aims to extract the core of traditional cohousing theory and explore the role of cohousing in the UK. Research will provide information by exploring sustainable community building strategies and show the best practice in Sheffield, UK.

Within cohousing, residents are committed to living together as a community and gain the benefit of a supportive social network (Garciano, 2011). Cohousing residents are encouraged to participate in the physical layout design, space planning, common facilities and meal sharing community activities and management of their neighbourhood (Garciano, 2011). In particular, Sargisson (2010) pointed out, 'Consensus is the heart of the system of management in cohousing communities even if it requires time, patience, funds and a strong willingness to solve internal and external issues.'

A cohousing community is a group of between 8 and 40 households, a multi-generational mix of singles, couples, families with children, and older people who share facilities and belongings. Living costs are reduced by sharing resources, advanced environmental technologies, education and other social services, such as shared gardens, cars, child and elderly care, caregiver support, tutoring and training (Priest, 2015 & Garciano, 2011). In fact, as stated by the UK Cohousing Network (2016), cohousing communities have a common house, with shared facilities such as cooking and dining spaces, meeting and playing areas, laundries and guest rooms.

2.2 Current situation of Cohousing communities in the UK

Along with the development of the housing market over the past two decades, 19 Cohousing communities were built all over the country, 38 listed cohousing groups are in development and five listed groups are forming their membership (UK Cohousing Network, 2017). There are several types of cohousing in the UK, such as senior, intergenerational, vegan and vegetarian, eco and self-build cohousing attracting people with different philosophies. A growing number of design companies, decision makers and local authorities are devoted to pushing forward the development of cohousing communities, such as Sheffield City Council and Sheffield Cohousing Network, Yorkshire. Most of the cohousing projects are small scale and self-funded by the residents as there is no public funding for cohousing (UK Cohousing Network, 2017). Due to community size, shared ownership, land price, and location, community financial models are different.

2.3 Why Sustainable Co-housing?

Due to environmental and social sustainability, more people are looking for alternative ways (co-housing) to home themselves and to be part of the community. Shared household tasks, private living space combined with easy access to socialising; pooled financial resources; the safe environment in which children can grow; and an extended family made up of people of diverse ages, interests and backgrounds provides a rich living experience (Waxman, 2005 p57). The design layout and the nature of sharing may reduce social isolation, especially for the older person (UK Cohousing Network, 2017); and create a sense of belonging which leads to the identity of the community (Yousefi et al. 2017). Cohousing communities also offer a platform for residents to interact with nature and the land (Sanguinetti, 2014). More sustainable technologies can be introduced such as biomass boilers, composting and solar panels. The cohousing model is effective in inspiring people how to make their life greener and healthier with vegetable and fruit planting on site that supports the community food

supply. The land is nourished and the environmental footprint reduced, allowing individuals to think beyond themselves, and their impact on a wider neighbourhood and the environment.

Other activities could be found in the community, such as regular meetings, weekly community working, outdoor maintenance, coffee or afternoon tea meetings. Cohousing provides personal privacy whilst creating strong, supportive and 'family' bonds between residents that are reinforced by the long-term ownership and maintenance of the communal areas.

3.0 Methodology

This study aims to examine the advantages and limitations of cohousing and the extent to which it can lead to building sustainable communities, by exploring residents' preferences, daily activities and multigenerational living in cohousing case studies in the UK. In order to appreciate a cohousing development model, interviews with stakeholders through three cohousing projects have been chosen. This qualitative approach examined the differences and similarities between people's philosophies of living. (Strauss & Corbin, 1998). Participants are members from three cohousing groups in Sheffield. The research compares the various developing stages and features between different cohousing groups in Sheffield and explores how cohousing could be used as an evaluation tool for environmental sustainability and to guide behavioural change. The methodology has been explained through the following flowchart (Fig. 1).

3.1 Case selection

In this study, three cohousing communities were chosen for data analysis. They are members of a new cohousing union, The Sheffield Cohousing Network. There are five cohousing groups in Sheffield, which are in different developing stages. Sheffield cohousing groups have rich resources for cohousing researchers to understand the cohousing development process. Cohousing models in Sheffield involved self-build and property renovation using environmentally sustainable technologies. These communities have been designed to involve both young and older residents. These projects clearly show how cohousing models work with different age groups and how community space has been planned and utilised. Sheffield City Council's policies towards co housing attracts people to the local area. Considering the data accessibility and the case location, The Open-House Project, On the Brink cohousing and the Five Rivers cohousing were selected for further data analysis. The location of these cases is shown below (Fig. 2), Five Rivers cohousing group is still collecting ideas for location.

3.2 Desktop review

The desktop research is fundamental and provides an image for the case studies. It covers the existing data in projects mission statements, residents type, construction type, case location, development stages, the project starting time and how many members the project currently have.

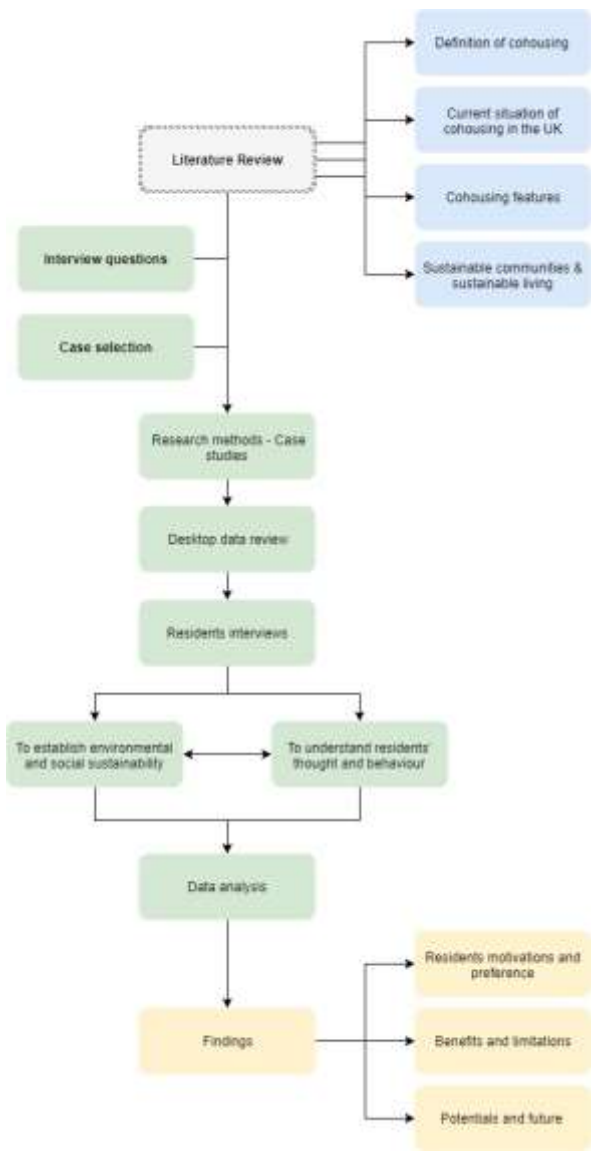


Fig. 1: Methodology Flowchart
(Source: The Author)

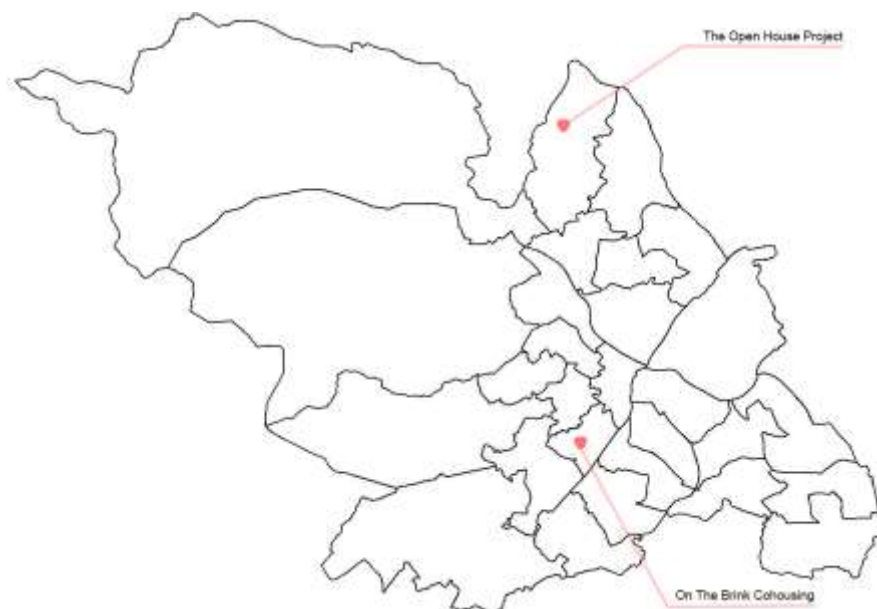


Fig. 2: Case study sites in Sheffield
(Source: The Author)

Table 1. Desktop review of cohousing projects

	The Open House Project	On The Brink cohousing	Five Rivers cohousing
Brief of the project	<ul style="list-style-type: none"> - To provide a range of homes, for families or individuals who are at any stage in their life - To facilitate mutual support through shared meal and activities, consensus decision making, and thoughtful design. (regular meeting, common meals, common spaces, facilities and shared resources) - Low environmental impact (energy use, waste disposal and use of vehicles) - Develop links with the wider community 	<ul style="list-style-type: none"> - Private living space and communal space for sharing resources, work and mutual care - Socially sustainable community based on companionship, ecological living and mutual respect for each other - As ecologically sustainable way as possible - Engage with wider community - Grow plants and managing the natural environment - Have fun, enjoy life and learning from each other 	<ul style="list-style-type: none"> - The community based-on private dwellings with a high degree of co-operation and shared space, values and resources. - Achieve high environment standards. - Reduce residents' carbon footprints and living cost by sharing - Regular meeting and consensus decision making - Offer affordable homes to range of households

Residents type	Mixed-age group, the multigenerational living	Mixed-age group, the multigenerational living	Mixed-age group, the multigenerational living
Construction type	Conversion of farm buildings (historical site)	Refurbishing the historical building	New-build
Location	Barnes Hall Farm, Bumcross,	Brincliffe House, Nether Edge	/
Development Stages	- Set up a company; - Moved into the first house in Jan 2016; - Building the second house.	- Set up a community interest company; - Site selected; - Waiting for investment	- Set up a company; - Developing collective ideas for location, architecture and site layout.
Starting time	2011	2014	2012
Group members	10 adults and 8 children	9	5 paid up members

3.3 Cohousing resident interviews

Semi-structured interviews were conducted with the residents, founder members and architects. Seven people were recruited for the interview process and were given open ended questions; they are the cohousing members from the selected cases. Each interview took 40-60 minutes. The conversations were recorded with the participants' permission for further analysis. The interview activity follows the University's ethics guide by using Participants Information Sheet (PIS) and Consent Form (CF). The questions were developed based on findings from the literature review and desktop data. Nine interview questions were used, which were targeting a) residents and founder members' motivation and preferences, b) community design and sustainable living, c) current limitations and disadvantages and, d) affordability.

3.4 Research methods limitations

The research methods in this study are restricted by the number and the age range of participants. 7 participants are involved in this study; 5 of them are older people; 2 of them are middle-aged. It does not include children and young families. Therefore, the findings are focused on an older people's opinion and preference. In addition, due to the development progress of the selected cases, they are different, with only one site visit having been done. The physical design information of the cohousing communities is limited. The research determines how cohousing living environments affect residents' daily activities and behaviour.

4.0 Results and Discussion

This research is based on interviews conducted during the summer of 2017 in Sheffield. The interview data was analysed according to the interview questions. Recordings were transcribed to extract the main concepts and key themes. The similarities and differences of answers for each question were compared. The interview findings were grouped and analysed into four sets, a) Motivation and Preferences, b) community design and sustainable

living, c) limitation and disadvantages, and d) affordability.

The main findings of the interviews are shown below (Fig. 6); the mutual support between community members, the sense of community and multigenerational living became the top three important factors to motivate people to create or join a cohousing community. All participants prefer to live in a mixed-age group. The benefits found were for older people who maintain their independence to age-in-place. Also, the communities layout and sustainable living promoted residents' thinking and behaviour change. The current disadvantages for cohousing living were found to be, the financial limitation to develop or join a cohousing community and new member's recruitment. In addition, the heavy community obligations and lack of social housing support are also affecting cohousing groups. Regarding the affordability aspects of cohousing community, people who do not have the capital are finding it difficult to join the community. Mutual home ownership or co-ownership and rental elements may able to help this situation, but it depends on the setting and vision of the cohousing group.



Fig. 6: Main findings
(Source: The Authors)

4.1 Discussion

This paper aims to examine the advantages and disadvantages of cohousing communities by exploring residents' motivation, preferences and their opinions on shared community living through case studies. Comparing the project visions in the desktop data review, mutual support/care, low impact living and link with wider community are the common interests and wishes to residents within the selected projects. All levels of sustainability (social, environmental and economic) are considered and established within the cohousing

development process. Due to the differences of location and community design, groups are facing various issues, such as pet, food choice and land purchase. However, the projects are trying to involve different age groups and sharing common values to make contributions to the sustainable community building. Furthermore, the limitations and drawbacks still remain. How to make this housing schemes available and affordable to the various social groups is a long term issue. More and more groups are looking for mixed-age cohousing groups, but young people and young families are in a difficult position to join a cohousing because of financial limitations. It is necessary to obtain support from government and the local council. There is no structural and complete guide in the UK for the cohousing community development process. Also, the lack of support from social organisations in promoting community leadership and communication is obvious. It is the aim of this research to support cohousing groups to create their communities in the future.

In addition, this research promotes interest in co housing in an unbalanced UK housing market, lack of affordable housing, liveable community building, more comprehensive social care and the issues of social isolation. The cohousing model offers a living option for different age groups and provides them with a mutual-support community. Also, the study of a cohousing model could provide the useful solution of the mentioned issues. However, UK cohousing communities are still small scale. This living model still needs more theoretical, social and financial support. It also requires more sociological research to explore people's current and previous living styles and relationships between generations and cultures.

5.0 Conclusion

This research examined the cohousing model in Sheffield and provided a better understanding of the benefits, challenges and trends of cohousing communities. The comparison of case studies has highlighted the potential of cohousing, which can be an option for older people to age-in-place. As the older people play an important role within the cohousing community, future research will pay more attention to how cohousing living affects older people's thinking and behaviour; and how to improve the physical design to meet their environmental and social needs. This research will become a valuable reference for cohousing development in the UK and merit the attention of various age groups, social and health care providers, architects and designers, and policy-makers.

The research shows the limitations of cohousing and provides a sustainability and affordability guidance for cohousing design. At the same time, the cohousing study becomes a milestone of the evolution of housing provision, leading to the change of attitude and behaviour. The findings of this study could guide cohousing design, and could benefit a wide range of stakeholders. It could also be applied to different criteria in the UK and beyond, accelerating the implementation of environmentally friendly homes and sustainable communities.

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